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ABSTRACT

The changing nature of available work and the economic pressure of its international neighbors are necessitating rapid changes in U.S. education. Educators must eliminate the inapplicability and the crudeness of the present division between academic, vocational, and general educational programs in the secondary schools. The major challenge in the years ahead will be to create a more comprehensive continuum to cater to the gamut of human intellectual capabilities. Instead of vocational schools per se what is needed are schools of applied knowledge where people of various ages gather at different points in their lives to receive education and training in a variety of fields, including preparation for technical, paraprofessional, and artistic endeavors. Such a school or center will have two foci: it will concentrate more on concrete, more practical forms of education, and it will direct considerable resources to the transition from school to work. The school will be a center of learning and its boundaries will be near such transitional offices or units as placement or job service offices, work-study coordination agencies, guild or union facilities, and military and college recruitment outposts and social service welfare offices. (MN)

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Stephen Kaagan

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EDUCATION FOR WORK, K-12

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1986

FOREWORD

The topic of this seminar paper, "Education for Work, K-12," responds in part to the basic question that drives the work of the National Center for Research in Vocational Education: What agencies best prepare which individuals for what kinds of occupations, under what conditions, with what effects, at what stage of their lives?

We are all familiar with the fact that our society is moving from an industrial-based economy to one based on services and information. A great deal has been written on the concurrent changes in the kinds of available jobs and the skills that are and will be required of the labor force. Whereas change of this sort is constantly occurring in any vital society, it is happening more rapidly than ever before, and thus this issue of education for work is particularly crucial.

Stephen Kaagan received a master of arts in English and a doctorate in education administration from the Harvard Graduate School of Education. He has taught high school English in the United States and Australia and has held a variety of positions in education administration including Assistant to the Dean and Director of Admissions and Financial Aid at the Harvard Graduate School of Education; Director of Planning and Assessment, Institute for Learning and Teaching, University of Massachusetts at Boston; Special Assistant to the Deputy Commissioner for Development, United States Office of Education; Director of Planning and Policy Development, and Deputy Commissioner, Massachusetts Department of Education; Provost, Pratt Institute; Commissioner of Education, State of Vermont, 1982 to the present. Dr. Kaagan has also served many consultancies in education planning and policy and is the author of numerous papers and publications.

On behalf of The Ohio State University and the National Center for Research in Vocational Education, I am pleased to present this seminar paper by Stephen Kaagan.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EDUCATION FOR WORK, K-12

My presentation today is about education for work, from kindergarten through grade 12. When I think about work, I can't help but reflect on Studs Terkel's 1972 book called *Working*. He says in the introduction,

> This book, being about work, is by it's very nature, about violence—to the spirit as well as to the body. Its about ulcers as well as accidents, about shouting matches as well as fist fights, about nervous breakdowns, as well as kicking the dog around. It is, above all (or beneath all) about daily humiliations. To survive the day is triumph enough for the walking wounded among the great many of us.
>
> The scars, psychic as well as physical, brought home to the supper table and the TV set may have touched, malignantly the soul of our society, more or less. ("More or less," that most ambiguous of phrases, pervades many of the conversations that comprise this book, reflecting, perhaps, an ambiguity of attitude toward The Job. Something more than Orwellian acceptance, something less than Luddite sabotage. Often the two impulses are fused in the same person.) It is about a search, too, for daily meaning as well as daily bread, for recognition as well as cash, for astonishment rather than torpor; in short, for a sort of life rather than a Monday through Friday sort of dying. Perhaps immortality, too, is part of the quest. To be remembered was the wish, spoken and unspoken by the heroes and heroines of this book. (p. xi)

If you don't like Terkel, you can always rely on current TV ads with bastardized epigrams such as these: "You work hard, use Right Guard," or "For all you do, this Bud's for you."

Enlightenment on the matter of education, I think, is available from a number of sources.

Let me test you with a statement that is very important, from Patricia Graham, currently the dean of the Harvard Graduate School of Education. In a note to her faculty, she writes something that I think is extremely profound:

> Education deals with the ordinary, long-term, fundamental needs of a nation and its populace. Defects in education are normally not life threatening as blocked coronary arteries are. Educational entanglements do not customarily send one to jail. The state of ordinariness or normalcy which typically surrounds educational issues obscures the vital function that education is providing in the long term. Successful education rests on the participation of the populace, all 40 million children and their families to engage regularly in activities that are vital for them over the lifetime but often seem unimportant, uninteresting or even trivial on a daily basis. (Notes to the Harvard faculty, 1985).

If you have trouble with Pat Graham's seriousness, you can always revert to one of Henry Miller's best, *On Turning 80*. He says

> What is called education to me is utter nonsense and detrimental to growth. Despite all the social and political upheavals we have been through, the authorized educational methods throughout the civilized world remain, in my mind, at least archaic and stultifying. They help to perpetuate the ills which cripple us. (1972, p. 14)

There's good reason to be sober about work and about those issues that relate to education for work. First of all, preparation for work is not and should not be seen as tutelage for nirvana. It is, perhaps more than anything else, a mixed blessing, somewhere between an enabling contribution to self and society and a necessary evil, something that has the capacity to enoble but also to debilitate. I think it is also important to look soberly at work in order to look soberly at education, as Pat Graham does, and in a jaundiced way. It's important to distinguish between the successes and failures of education, and this is not always easy to do.

With that as preface, let me now talk about three particular questions. First, how immediate is the need for change in both academic and vocational education? Second, what should be the nature of the interaction between academic and vocational education, or their successors? And finally, what might a revised form of vocational education look like?

There has been much written about the changing nature of the job market. I refer to a piece by a friend of mine, Richard Wolkomir, that was published in a recent issue of *OMNI*. In it, he delineates 10 fading careers and 10 emerging ones. Of the 10 fading jobs here are 5: assembly line worker, postal worker, tax preparer, fast-food worker, and computer programmer. The first impression one gathers in examining these is diminution of roles on the production line. For the first time we are also beginning to see in the job market, computerization victims such as postal workers, tax preparers and even fast-food workers.

On the emerging side, there are many jobs that relate to computers, such as database managers, digitechnicians, and artificial intelligence engineers. There are also others that reflect new frontiers, for example, aqua culturists, space technologists, and some having to do with changing demography, geriatricians or people who work with older adults. Still other jobs that are emerging have to do with people's interactions with each other and our concern for the ways in which we relate, jobs for educationists and professional humanists.

A few things are very clear from all this. First, we are in the midst of an important transition with regard to the nature of work, reflecting changes in the kinds of tools used and the kind of environment in which they will be used. Second, changes are happening very quickly and they will, I believe, continue to happen more quickly than they ever have before. More so, now and tomorrow, we will face high levels of uncertainty with regard to the job market. We will, all of us, have to adapt quickly to new demands in ood jobs, and many of us, will have to adapt to new jobs altogether several times in our lives.

Why must vocational and academic education change? Perhaps the work that has affected my thinking the most in the last several years is Howard Gardner's *Frames of Mind*. In it he outlines seven intelligences, seven intellectual capabilities, that exist in every human being. To cite them quickly, the first, linguistic intelligence, is best exemplified in the poet, the second, musical intelligence, in the composer, the third, logical mathematical intelligence, in Albert Einstein, the fourth, spatial intelligence, in the master chess player, the fifth, bodily kinethetic intelligence, in the dancer, and the sixth and seventh, intra- and inter-personal intelligence, in Mahatma Gandhi. Each

one of the intelligences carries with it a separate mode of learning, distinct definitions of excellence and different educational strategies. One of the interesting things is not whether in some basic sense Gardner is right about human intelligence, but why at this time a book such as *Frames of Mind* appears and becomes as visible to a general audience as it has.

There are two reasons for this, two reasons in effect that will perpetuate this concern for human intellectual capacity for a considerable time to come. One, the intelligences for the most part that Gardner cites center on unused human capacity. Behind that is the demographic reality that there will be fewer young people entering the labor market in the next 10 years than there have been in the previous 10. The second involves economics and the role of the United States in competition with other countries. Because we are losing out to our more thoughtful competitors on the international scene we are increasingly anxious about unused intellectual capacity among our populace. We need therefore to look hard at the way we educate our students.

Together these two developments—the changing nature of available work and the economic press of the mental capacities of our international neighbors, are causing us to see the need for rather rapid changes in both academic and vocational education.

My second area of concern is the nature of the interaction between academic and vocational education. Here I travel a well-worn path, but one that is as directional today as it was when James Conant wrote *The Comprehensive High School* thirty years ago. Educational institutions, K-12, have to create a more comprehensive continuum to cater to the gamut of human intellectual capabilities. If this sounds like the comprehensive school revisited, then so be it. The point is that our major challenge in the years ahead will be to provide more coherent and balanced educational offerings to respond to individual capabilities and, in turn, for those capabilities as they are developed to allow individuals to be more economically productive.

If we do this, we must eliminate the inapplicability and the crudeness of the present paradigm that we use in secondary schools—academic, vocational and general. So much of what we do in classifying students still derives from that paradigm. The paradigm does not fit the outer world of work in its dynamic state, nor does not fit the inner world of human intelligence in its diversity and richness. As your executive director said to me earlier today, there really does have to be a blurring of the lines; as educators, we have to dispense with the categories and see our role as multifaceted and on a continuum, rather than as categorical.

My third concern, what is the most likely outcome for vocational education in this maelstrom? Instead of vocational schools *per se* I envision schools of applied knowledge where people of various ages gather at different points in their lives to receive education and training in a variety of fields. The fields will span the technical, the paraprofessional, and the artistic. If one encompasses the human intellectual capabilities that Gardner speaks of, three or four of the seven relate to artistic capabilities. Also, a key aspect of the impending labor market has to do with artistic capabilities—for leisure, craft, and also the human touch that Wolkomir talks about in the jobs that will have currency. So the three capabilities mentioned—technical, paraprofessional, and artistic—will probably dominate the curriculum of this school or center of applied knowledge, at least for the foreseeable future.

This school or center will have two foci. First, it will concentrate more on concrete learning, i.e., more practical forms of education. Perhaps that is true in some sense of vocational education as it exists now. Second, it will direct considerable resources to the transition from school to work. Around the school of applied knowledge, within or near the school walls, will be an array of structures related to practice in a variety of occupational fields and opportunities for further training or

education. The school will be a center of learning and at its boundaries there will be transitional offices. There is likely to be, near the educational work space, such units as the following:

- Placement or job service office
- Work-study coordination agency
- Guild, association, or union facilities
- Military and college recruitment outposts and social service or social welfare offices

In conclusion both academic and vocational education will need to change soon, and the operation of vocational centers will change along with them. I have given at least the beginning outlines of an envisioned new form of vocational education, a school or center of applied knowledge. Major social and economic shifts, combined with a much greater awareness of the range and diversity of human intellectual capacities, will force new demands and new structure on the educational system. It is very unlikely that vocational schools, as we know them, will survive this watershed. It is only through engineering this transition ourselves that we can do two important things: meet the requisite of a Pat Graham that we build an educational system that fulfills long-term fundamental needs, and pay heed to the concern expressed by Studs Terkel that human beings require greater satisfaction from human institutions then they are presently getting.

QUESTIONS AND ANSWERS

Stephen Kaagan

Question: What is the role of employers in your school of applied knowledge?

When I was envisioning the school, I was thinking particularly about public education and its role and responsibility. One of the developments we will all have to deal with is the privatization of education, and I cannot answer your question directly concerning the role of employers. I am sure they will have a significant role, particularly at the boundaries of the center or school. But my first concern is public responsibility for education and the kind of institution that would fulfill the public mandate to educate all students. I firmly believe that such an institution will have to be tax supported in its core function. I do not believe that the employing community will supplant that role or take over some of that responsibility.

Question: Where do colleges and universities fit into this emphasis on education for practical needs?

Before becoming Commissioner of Education in Vermont, I was the academic head of a professional school. The main reason I went to the school was to learn about the fields it offered, the arts, architecture, engineering, and design. One of the fascinating findings that I learned after being there for a period of time was that the students came to pursue their professional development and, in so doing, they went through a process of making many decisions about what they wanted to learn and what they wanted to be. They came wanting to be designers and they found out that the largest question that they had to confront was not whether they could be good designers technically but what, in effect, they wanted to design. In the process, technical skills became secondary.

I think that the most important thing for institutions of higher education to do is to experience some of what I am suggesting. I am not sure it is possible, particularly in the arts and sciences field, but it seems that the lessons to be learned are, in part, that professional education or vocational training are a way of learning.

One of the things that troubles me most about the way vocational education is evaluated is whether or not students take a job in the particular field for which they were trained. This is probably not a fair measure of a program's effectiveness. One of the ways in which that could be changed would be to change the earmarks by which you, yourselves, are judged, so that other people could perceive you differently. If you want someone's behavior to change, you have to think first about how your own behavior can change. Some of the problems in vocational education concern the way professionals in that field depict themselves. I have given you one good example. So, the first and most important question is, how can I describe myself differently to an audience that I want to change? Ultimately it will only be through a university's experience of the different ways that people learn, that they will learn the value of career programs and professional preparation.

Question: How is Vermont responding to the educational reform movement?

The motivating force for reform in Vermont has been the State Board of Education, not the Legislature, and to a lesser extent, the Governor. We have chosen to establish higher standards, something a number of states are doing. Our standards, since we are a local control state, are applied through local evaluation teams that approve or disapprove schools. In this process, we have raised graduation standards, perhaps even more stringently so. We have included 4 years of English, 3 of math, 3 of science, 3 of social studies, 1 of fine arts, and 1 1/2 of physical education in the curriculum. I am not particularly satisfied with the raw quantification that that represents, but I think it sets out a useful challenge for the educational community.

One of the more interesting issues in the whole reform movement in Vermont has been the relationship between these new graduation standards and access of student to vocational education. First and most important, standards have to be articulated regarding a basic education for every student, and second, if that is done, vocational education has to respond and figure out how it fits in with that definition of a basic education. There is a jarring of political forces right now within the state, particularly over three years of math and science and their effect on vocational offerings.

My strong feeling is that the requirement for 3 years of experience in math and science and 1 in the arts represents, in the long run, a true opportunity for vocational education. Let me review a couple of concepts. The state board has stuck to a definition of one educational requirement. In other words, we do not distinguish tracks; we do not say there is a regents' diploma and a vocational diploma; we say there is one diploma. The challenge is for all tracks—vocational, general, and academic—to respond, to lift themselves into a clearer sense of what the requirement means for them. This whole discussion reflects the single most important issue for us right now within our reform movement.

Question: What is the role of a vocational education?

I believe it is possible to define, with integrity, an educational experience or set of experiences that every student should have access to.

Vocational education is a particular mode of learning. In most instances I will grant that there are, depending on economic conditions, selected areas where there is an opportunity for a student to graduate from secondary school and, in effect, to have been trained for a job. In the Barre Vocational Center in Vermont, we have a granite trades program that is superb, and 100 percent of the students are placed in jobs. But if one looks at business education programs in Barre, the same thing is not true.

Students learn in different ways. What I found at Pratt Institute when I was there was that students struggled with the relationship between the acquisition of technical skills and the acquisition of knowledge in the development of concepts. Some students achieved the former first and the latter second and others, vice versa. At one or another point in our lives, we have to deal with this dichotomy or tension.

Vocational education is an opportunity, a route through which learning can take place, more so than it is training for the first job. I think all vocational educators have to begin to understand that and come to grips with where vocational education sits on a continuum.

Question: What should the National Center do?

There are several areas that occur to me. One is the whole area of transition, particularly for special populations.

What happens to a young disadvantaged person who is trying to make a transition with a series of disadvantages in his or her back pocket? That is a very difficult issue and one that I think needs to be addressed.

The second area is in the reform movement. There is a new interface necessary between academic education and vocational education. You ought to help describe that interface in a variety of ways. If you could draw together and disseminate some of what is known about what one does with certain kinds of students in math within vocational education or within the general track, that would be an enormous contribution. Take the issue of 3 years of high school mathematics for example. Is algebra, geometry, and trigonometry necessarily what are meant by 3 years of mathematics. There is a tremendous challenge here to redefine what mathematics ought to be for students who are not college-bound. Who is going to do that? Isn't that, in effect, part of the charge to an institution such as this?

Question: What is the role of vocational education in providing job entry skills?

I am not sure. Let me tell you why by citing an example. We say that job entry skills include the ability to conduct oneself well in an interview. This is often mentioned; people are criticized for not being able to do this well. Yet there probably isn't a student who has gone through a program in theatre arts who could not conduct himself or herself well in a job interview situation; but we never think of theater arts as providing job entry skills. What we do is establish courses in high schools for youngsters to learn how to conduct themselves well in a job interview, rather than understand that there is another whole layer of skills and attitudes that can be developed in other ways. In other words, I do not think we are very creative educationists.

Question: Wouldn't your two-school system make it harder for youth to explore?

No more so than the paradigm that we have now. Right now we have an academic program, for the elite, a vocational option, which has a sense of practicality with an emphasis on job entry skills, and a general program which prepares a person for an economic no man's land.

Question: Where would a future medical student fit?

Interestingly a medical student could come through either route the academic or the practical. People change during their lives. What is important to them when they are 18 years old and trying to learn technique is different from what is important to them 5 or 6 years later. They learn the technique, they feel intellectually empty, and they say to themselves, yes, I am an artist and I can use the brush, but I don't know what to paint so I have to read something. It is probably very idealistic to say so, but I think a potential doctor could come through either route. Why couldn't a surgeon, for example, with good spatial capabilities, come through the center for applied knowledge?

Question: You said that one of the excitements of being at Pratt was the realization that people were still exploring and trying to relate themselves to their values and their interests to various careers. The thing that worries me about the dual structure you are proposing of the college bound or the academic and the center for applied learning is that the possibility of people going back and forth between these programs and gaining experiences through exploring careers and making more valid choices for themselves (and

having a better basis for doing so) would be more difficult if you have separate institutions. Another factor that worries me and argues for the comprehensive institution is that vocational and academic programs need each other. I think academic learning and instruction would be enhanced by a more practical application in the delivery, and vocational education would be enhanced by more abstractions and theory and stronger underpinnings in the academic. So then the problem becomes how we can influence each other and preserve options for students and hopefully enrich both programs because of that.

I think it could be possible, depending on how one does some essential things. One of the things you would need to do to promote back-and-forth mobility is to change the methods of assessment. We now have a monopolistic system of pupil assessment in this country. It is called the SAT and the Secretary of Education is bold enough to evaluate education in this country using the Scholastic Aptitude Tests as one of two outcome measures. Think about the implications of that. If it were possible to create a diversity of assessment tools that more effectively tested the diversity of human intellectual capability, I think it would be equally possible to have a system in which people could move between applied and abstract experiences.

My view of the elite high school student in this country is the student who has milked the present system of education to the point where you find her at a Vocational Industrial Clubs of America (VICA) meeting with a project to show you that she has won at the national conference. You ask, "Are you a vocational student?" She replies, "yes." You ask what she is going to do now, and the answer is, "Go to RPI, Renessalaer Polytechnic Institute." The truly elite student in this country is the one who is able to draw out of the educational system the best of the abstract and the best of the practical, a vocational student who is also an academic student. We have to respond to some of these problems in a way that we have not and cannot through some of the single-dimension approaches we have to the assessment of human capability.

Question: Should we look at the comprehensive high school again?

I do think we should look at the comprehensive high school. One of the things that I have learned about American education is that we are creatures of vogue and we never laugh at some of the idiocy we can come up with. The latest round of idiocy is calling everything "literacy." We now have scientific and technological literacy on top of computer literacy on top of cultural literacy.

It may be time, for a variety of reasons, to take another look at the comprehensive high school. We have such a fleeting sense of validity. We tend to debunk and forget.

Question: How do we get back to the comprehensive high school?

Given that we have gone down the road of building so many specialized facilities, how could we ever reachieve an eclectic approach that would cut across a number of lines? Perhaps technology is one of the answers, but it is too easy an answer to give and that is the answer you would perhaps expect. Some of it, I think, rests perhaps with different ways of viewing the time that a student spends in a building, different ways of viewing scheduling. One of the other areas I have thought about concerns what the school of the future might actually look like. Whether it is a vocational school or whatever kind of facility it is, it is going to be populated by a number of different kinds of people of all different ages. If that is going to be true, I think some of the problem may begin to take care of itself, depending upon the mobility of the people within a geographic area.

Question: Where will the leadership for interagency cooperation on matters of transition from school to work come from?

It will come from the same place that some of the reform impetus is coming from right now—from political leadership, governors and legislators. I think there must be some way to follow up on the impetus that has been created around educational reform. Perhaps the second generation of the reform movement will have to do with educational functioning and its relationship to other functional areas. One of the outgrowths of that could be a variety of capacities that relate to schools coordinated with schools. There is not one state in this nation that has effective interagency coordination in areas where it is needed. The byword that I have in Vermont is you are unfortunate if you are served by one state agency, but pity anyone served by two. That is true in every state in this nation and I think we have to overcome that. The only force that will change it will be political leadership at its highest levels.

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